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SEQUENCE "T562400T"

Residue No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50		
Pepper																																																				
Guava	M	A	R	V	V	M	S	N	M	S	P	A	M	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S
Banana																																																				

Residue No.	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
Pepper																																																		
Guava	D	R	L	D	Y	N	W	F	Q	K	L	P	D	F	F	S	K	R	V	E	K	Y	N	S	T	V	F	R	T	N	V	P	P	C	F	P	F	F	L	G	V	N	P	N	V	V	A	V	L	D
Banana																																																		

Residue No.	101	102	103	104	105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120	121	122	123	124	125	126	127	128	129	130	131	132	133	134	135	136	137	138	139	140	141	142	143	144	145	146	147	148	149	150
Pepper																																																		
Guava	V	K	S	F	A	H	L	F	D	M	E	I	V	E	K	A	N	V	L	V	G	D	F	M	P	S	V	V	Y	T	G	D	M	R	V	C	A	Y	L	D	I	S	E	P	K	H	I	Q	I	K
Banana																																																		

Residue No.	151	152	153	154	155	156	157	158	159	160	161	162	163	164	165	166	167	168	169	170	171	172	173	174	175	176	177	178	179	180	181	182	183	184	185	186	187	188	189	190	191	192	193	194	195	196	197	198	199	200
Pepper																																																		
Guava	N	F	S	L	D	I	L	K	R	S	S	K	T	W	V	P	T	L	V	K	E	L	D	I	L	F	G	T	F	E	S	D	L	S	K	S	K	S	A	S	L	L	P	A	L	Q	K	F	L	F
Banana																																																		

Residue No.	201	202	203	204	205	206	207	208	209	210	211	212	213	214	215	216	217	218	219	220	221	222	223	224	225	226	227	228	229	230	231	232	233	234	235	236	237	238	239	240	241	242	243	244	245	246	247	248	249	250
Pepper																																																		
Guava	N	F	S	L	D	I	L	K	R	S	S	K	T	W	V	P	T	L	V	K	E	L	D	I	L	F	G	T	F	E	S	D	L	S	K	S	K	S	A	S	L	L	P	A	L	Q	K	F	L	F
Banana																																																		

Residue No.	251	252	253	254	255	256	257	258	259	260	261	262	263	264	265	266	267	268	269	270	271	272	273	274	275	276	277	278	279	280	281	282	283	284	285	286	287	288	289	290	291	292	293	294	295	296	297	298	299	300
Pepper																																																		
Guava	V	H	S	F	S	Y	P	Y	F	L	V	R	G	C	Y	E	K	L	I	K	F	V	K	S	E	A	K	E	V	L	T	R	A	Q	I	D	F	Q	T	T	E	Q	E	A	I	H	N	L	L	F
Banana																																																		

FIG.1A

[illegible]

Residue No	301	302	303	304	305	306	307	308	309	310	311	312	313	314	315	316	317	318	319	320	321	322	323	324	
Pepper	I	L	G	F	N	A	F	G	G	F	I	F	F	L	P	I	L	L	G	N	I	L	G	D	
Guava	I	L	G	F	N	A	F	G	G	F	S	I	F	L	P	I	L	L	S	N	I	L	S	D	
Banana	V	L	G	F	N	A	F	G	G	F	S	V	F	F	P	I	L	L	I	T	I	G	R	D	

Residue No.	346	347	348	349	350	351	352	353	354	355	356	357	358	359	360	361	362	363	364	365	366	367	368	369	370	371	372	373	374	375	376	377	378	379	380	381	382	383	384	385	386	387	388	389	390	391	392	393	394	395
Pepper	F	E	S	V	K	E	M	E	L	V	Q	S	F	V	Y	E	S	L	R	L	S	P	P	P	P	S	Q	Y	A	R	A	R	K	D	F	M	S	S	H	D	S	V	Y	E	L	K	K	G	E	
Guava	F	A	S	V	K	E	M	E	L	V	K	S	V	V	Y	E	L	R	L	N	P	P	P	P	F	Q	Y	A	R	A	R	K	D	F	Q	L	K	S	H	D	S	V	F	D	V	K	K	G	E	
Banana	F	E	T	V	R	E	M	E	L	V	R	S	T	V	Y	E	V	L	R	L	N	P	P	P	L	Q	Y	G	R	A	R	T	D	F	I	N	S	H	D	A	A	F	K	V	E	K	G	E		

Residue No.	396	397	398	399	400	401	402	403	404	405	406	407	408	409	410	411	412	413	414	415	416	417	418	419	420	421	422	423	424	425	426																			
Pepper	L	L	C	C	Y	Q	P	L	V	M	K	D	P	K	V	F	D	E	P	E	K	F	M	L	E	R	F	I	K	E	K	G	K	E	L	L	N	Y	L	F	W	S	N	G	P	Q	I	G	S	P
Guava	L	L	C	C	Y	Q	K	V	M	Y	D	P	K	V	F	D	E	P	E	S	F	N	S	D	R	F	F	V	Q	N	S	■	E	L	L	D	Y	L	W	S	N	G	P	Q	I	G	I	P		
Banana	L	L	C	C	Y	Q	P	L	V	M	R	D	P	A	V	F	D	P	E	I	F	A	P	E	R	F	F	M	G	■	S	G	K	E	L	L	K	Y	V	W	S	N	G	P	E	I	G	I	P	

Residue No.	444	445	446	447	448	449	450	451	452	453	454	455	456	457	458	459	460	461	462	463	464	465	466	467	468	469	470	471	472	473	474	475	476	477	478	479	480	481	482	483	484	485	486	487	488				
Pepper	T	E	S	N	K	Q	C	A	A	K	D	A	V	I	L	I	A	S	I	I	V	A	Y	I	F	Q	K	Y	D	S	V	I	S	F	S	S	G	S	L	I	S	V	K	K	A	C	STOP		
Guava	T	E	S	N	K	Q	C	A	A	K	D	Y	V	I	L	I	A	C	I	F	V	A	Y	N	F	R	Y	N	S	V	I	S	G	S	S	S	I	I	A	V	E	K	A	N	STOP				
Banana	T	P	A	N	K	Q	C	A	A	K	D	Y	V	V	E	I	A	C	L	L	M	A	E	I	F	V	R	Y	D	E	F	V	C	A	D	D	A	I	S	V	I	K	L	D	R	A	R	E	W

FIG. 1B

Residue No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50
Nucleotide	ATG	GCG	AGC	GTC	GTC	ATC	AGC	AAC	ATG	TGC	GCC	ATC	TGC	TCC	AGC	TAC	CCC	CCG	CCG	TCT	CTC	TCC	CCG	CCG	TGC	TGC	CCG	CCG	ACC	ATC	CCG	GTC	CCG	ATC	CCG	AGC	TAC	CCG	TGC	CCG	CCG	CTC	CTC	CCG	CCG	ATA	TGC			
Amino acid	<u>Met</u>	A	R	V	V	<u>Met</u>	S	N	<u>Met</u>	S	P	A	<u>Met</u>	S	S	T	Y	P	P	S	L	S	P	P	S	S	P	R	P	T	I	L	P	V	R	T	I	P	G	S	G	W	P	L	L	G	P	I	S	

Residue No.	Nucleotide	codon	Amino acid
51	GAC	GCG	Ala
52	D R	LDY	Leu
53	GTC	GTC	Val
54	TAC	TTC	Phe
55	TTC	TTC	Phe
56	TTC	TTC	Phe
57	TTC	TTC	Phe
58	TTC	TTC	Phe
59	TTC	TTC	Phe
60	TTC	TTC	Phe
61	TTC	TTC	Phe
62	TTC	TTC	Phe
63	TTC	TTC	Phe
64	TTC	TTC	Phe
65	TTC	TTC	Phe
66	TTC	TTC	Phe
67	TTC	TTC	Phe
68	TTC	TTC	Phe
69	TTC	TTC	Phe
70	TTC	TTC	Phe
71	TTC	TTC	Phe
72	TTC	TTC	Phe
73	TTC	TTC	Phe
74	TTC	TTC	Phe
75	TTC	TTC	Phe
76	TTC	TTC	Phe
77	TTC	TTC	Phe
78	TTC	TTC	Phe
79	TTC	TTC	Phe
80	TTC	TTC	Phe
81	TTC	TTC	Phe
82	TTC	TTC	Phe
83	TTC	TTC	Phe
84	TTC	TTC	Phe
85	TTC	TTC	Phe
86	TTC	TTC	Phe
87	TTC	TTC	Phe
88	TTC	TTC	Phe
89	TTC	TTC	Phe
90	TTC	TTC	Phe
91	TTC	TTC	Phe
92	TTC	TTC	Phe
93	TTC	TTC	Phe
94	TTC	TTC	Phe
95	TTC	TTC	Phe
96	TTC	TTC	Phe
97	TTC	TTC	Phe
98	TTC	TTC	Phe
99	TTC	TTC	Phe
100	TTC	TTC	Phe

Residue No.	Nucleotide	codon	Amino acid
101	TGC	GAG	TGC
102	CAC	TTC	CAC
103	TTC	GCT	TTC
104	ATC	GAG	ATC
105	ATC	GAG	ATC
106	ATC	GAG	ATC
107	ATC	GAG	ATC
108	ATC	GAG	ATC
109	ATC	GAG	ATC
110	ATC	GAG	ATC
111	ATC	GAG	ATC
112	ATC	GAG	ATC
113	ATC	GAG	ATC
114	ATC	GAG	ATC
115	ATC	GAG	ATC
116	ATC	GAG	ATC
117	ATC	GAG	ATC
118	ATC	GAG	ATC
119	ATC	GAG	ATC
120	ATC	GAG	ATC
121	ATC	GAG	ATC
122	ATC	GAG	ATC
123	ATC	GAG	ATC
124	ATC	GAG	ATC
125	ATC	GAG	ATC
126	ATC	GAG	ATC
127	ATC	GAG	ATC
128	ATC	GAG	ATC
129	ATC	GAG	ATC
130	ATC	GAG	ATC
131	ATC	GAG	ATC
132	ATC	GAG	ATC
133	ATC	GAG	ATC
134	ATC	GAG	ATC
135	ATC	GAG	ATC
136	ATC	GAG	ATC
137	ATC	GAG	ATC
138	ATC	GAG	ATC
139	ATC	GAG	ATC
140	ATC	GAG	ATC
141	ATC	GAG	ATC
142	ATC	GAG	ATC
143	ATC	GAG	ATC
144	ATC	GAG	ATC
145	ATC	GAG	ATC
146	ATC	GAG	ATC
147	ATC	GAG	ATC
148	ATC	GAG	ATC
149	ATC	GAG	ATC
150	ATC	GAG	ATC

Residue No.	Nucleotide codon	Amino acid	Peptide 13										Peptide 12										Peptide 15																										
151	152	153	154	155	156	157	158	159	160	161	162	163	164	165	166	167	168	169	170	171	172	173	174	175	176	177	178	179	180	181	182	183	184	185	186	187	188	189	190	191	192	193	194	195	196	197	198	199	200
AAC	TTT	GGC	ATG	GAC	ATA	CTG	AAG	AGC	AGC	TCC	AAA	GTC	TGC	GAC	ACC	GAA	CTG	ATC	TCC	AAC	TTC	GAC	ACC	ATC	TGG	GAC	ACC	ATC	GAG	TCC	AGC	CTC	GGC	AGG	GGC	AAC	GGC	AGC	GTC	ATC	TTC	CTT	CTC	CAC	AAG	TTC	CTC	TTC	
N	F	A	M	D	I	L	K	R	S	S	K	V	W	E	S	E	V	I	S	N	L	D	I	M	W	D	I	E	S	S	L	A	K	D	G	N	A	S	V	I	F	P	L	Q	K	F	L	F	
			Peptide 13										Peptide 12										Peptide 15																										

Residue No.	201	202	203	204	205	206	207	208	209	210	211	212	213	214	215	216	217	218	219	220	221	222	223	224	225	226	227	228	229	230	231	232	233	234	235	236	237	238	239	240	241	242	243	244	245	246	247	248	249	250
Nucleotide codon	AAC	TTC	CTC	TCC	AGC	TCC	ATC	ATC	GAC	GCT	GAC	CGC	CGC	CGC	TGC	CGC	CTG	GCC	AGC	TCC	GCC	TAC	GCC	ATG	CTT	GAC	CGC	TGG	CTC	GCT	CTC	GAC	CTC	CGC	ACC	ATC	AAC	ATT	CCC	GTA	CIG	GAC	GCT	CTA	CTG	GAC	ATT	TTT		
Amino acid	N	F	L	S	K	S	I	I	G	A	D	P	A	A	S	P	Q	V	A	K	S	G	Y	A	M	L	D	R	W	L	A	L	Q	L	L	P	T	I	N	I	G	V	L	Q	P	L	V	E	I	
Peptide																15																																		

Residue No.	Nucleotide codon	Amino acid
251	CAG	Glu
252	CAI	Ile
253	CTG	Leu
254	CTG	Leu
255	CTG	Leu
256	CTG	Leu
257	CTG	Leu
258	CTG	Leu
259	CTG	Leu
260	CTG	Leu
261	CTG	Leu
262	CTG	Leu
263	CTG	Leu
264	CTG	Leu
265	CTG	Leu
266	CTG	Leu
267	CTG	Leu
268	CTG	Leu
269	CTG	Leu
270	CTG	Leu
271	CTG	Leu
272	CTG	Leu
273	CTG	Leu
274	CTG	Leu
275	CTG	Leu
276	CTG	Leu
277	CTG	Leu
278	CTG	Leu
279	CTG	Leu
280	CTG	Leu
281	CTG	Leu
282	CTG	Leu
283	CTG	Leu
284	CTG	Leu
285	CTG	Leu
286	CTG	Leu
287	CTG	Leu
288	CTG	Leu
289	CTG	Leu
290	CTG	Leu
291	CTG	Leu
292	CTG	Leu
293	CTG	Leu
294	CTG	Leu
295	CTG	Leu
296	CTG	Leu
297	CTG	Leu
298	CTG	Leu
299	CTG	Leu
300	CTG	Leu

FIG. 2A

Residue No.	Nucleotide codon	Amino acid	SEQ ID NO:27	SEQ ID NO:6
451	GCG	Arg	488	
452	GCT	Ala	489	
453	TAC	Tyr	490	
454	GAC	Asp	491	
455	ACC	Thr	492	
456	GTC	Val	493	
457	ACC	Thr	494	
458	CTC	Leu	495	
459	ACC	Thr	496	
460	GCT	Ala	497	
461	CTC	Leu	498	
462	TTC	Phe	499	
463	GTC	Val	500	
464	GTC	Val	501	
465	GTC	Val	502	
466	TAC	Tyr	503	
467	TAC	Tyr	504	
468	TTC	Phe	505	
469	TTC	Phe	506	
470	CTT	Leu	507	
471	GTC	Val	508	
472	GTC	Val	509	
473	GTC	Val	510	
474	GTC	Val	511	
475	GTC	Val	512	
476	GTC	Val	513	
477	GTC	Val	514	
478	GTC	Val	515	
479	GTC	Val	516	
480	GTC	Val	517	
481	GTC	Val	518	
482	GTC	Val	519	
483	GTC	Val	520	
484	GTC	Val	521	
485	GTC	Val	522	
486	GTC	Val	523	
487	GTC	Val	524	
488	GTC	Val	525	
489	GTC	Val	526	
490	GTC	Val	527	
491	GTC	Val	528	
492	GTC	Val	529	
493	GTC	Val	530	
494	GTC	Val	531	
495	GTC	Val	532	
496	GTC	Val	533	
497	GTC	Val	534	
498	GTC	Val	535	
499	GTC	Val	536	
500	GTC	Val	537	
501	GTC	Val	538	
502	GTC	Val	539	
503	GTC	Val	540	
504	GTC	Val	541	
505	GTC	Val	542	
506	GTC	Val	543	
507	GTC	Val	544	
508	GTC	Val	545	
509	GTC	Val	546	
510	GTC	Val	547	
511	GTC	Val	548	
512	GTC	Val	549	
513	GTC	Val	550	
514	GTC	Val	551	
515	GTC	Val	552	
516	GTC	Val	553	
517	GTC	Val	554	
518	GTC	Val	555	
519	GTC	Val	556	
520	GTC	Val	557	
521	GTC	Val	558	
522	GTC	Val	559	
523	GTC	Val	560	
524	GTC	Val	561	
525	GTC	Val	562	
526	GTC	Val	563	
527	GTC	Val	564	
528	GTC	Val	565	
529	GTC	Val	566	
530	GTC	Val	567	
531	GTC	Val	568	
532	GTC	Val	569	
533	GTC	Val	570	
534	GTC	Val	571	
535	GTC	Val	572	
536	GTC	Val	573	
537	GTC	Val	574	
538	GTC	Val	575	
539	GTC	Val	576	
540	GTC	Val	577	
541	GTC	Val	578	
542				

FIG. 2B